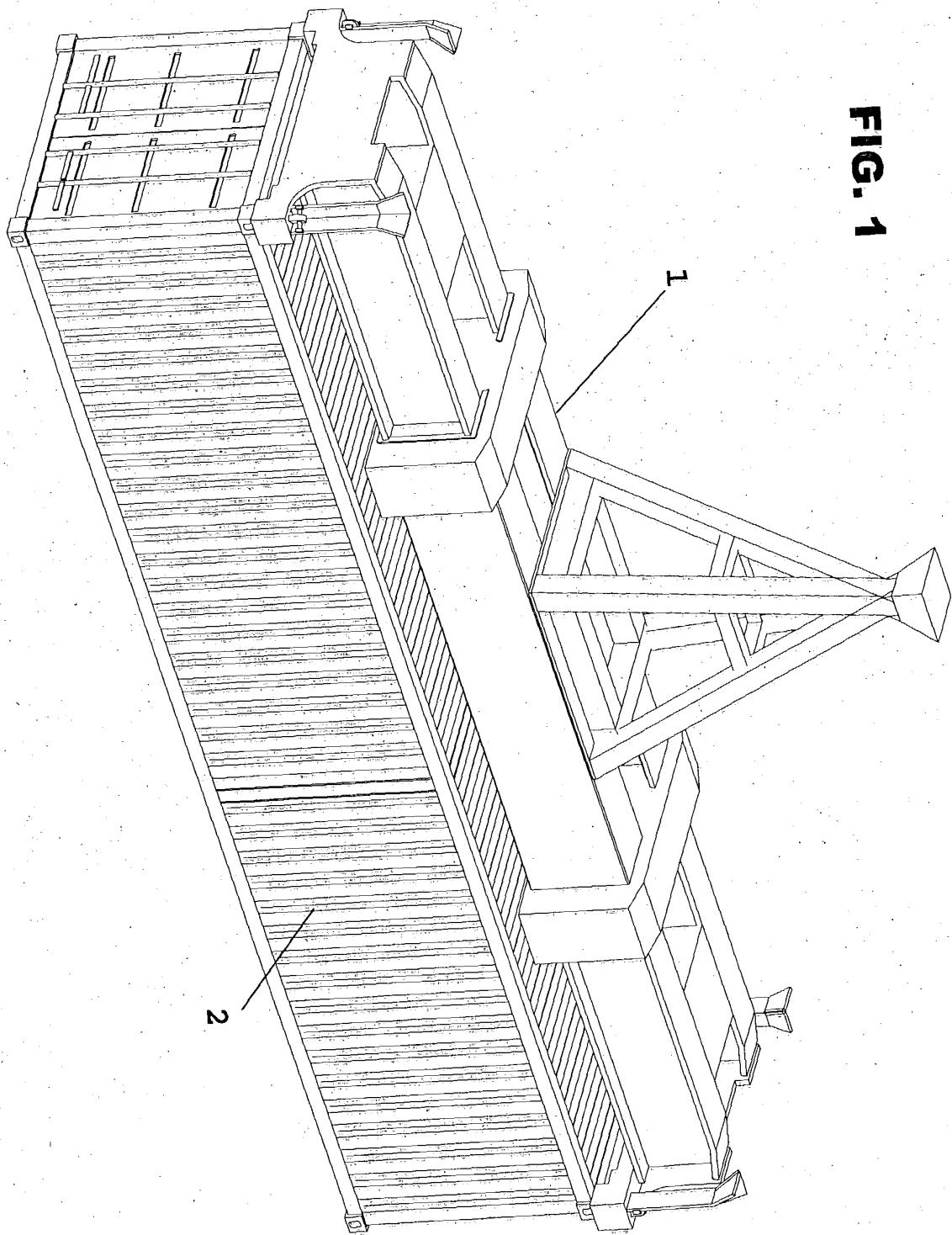


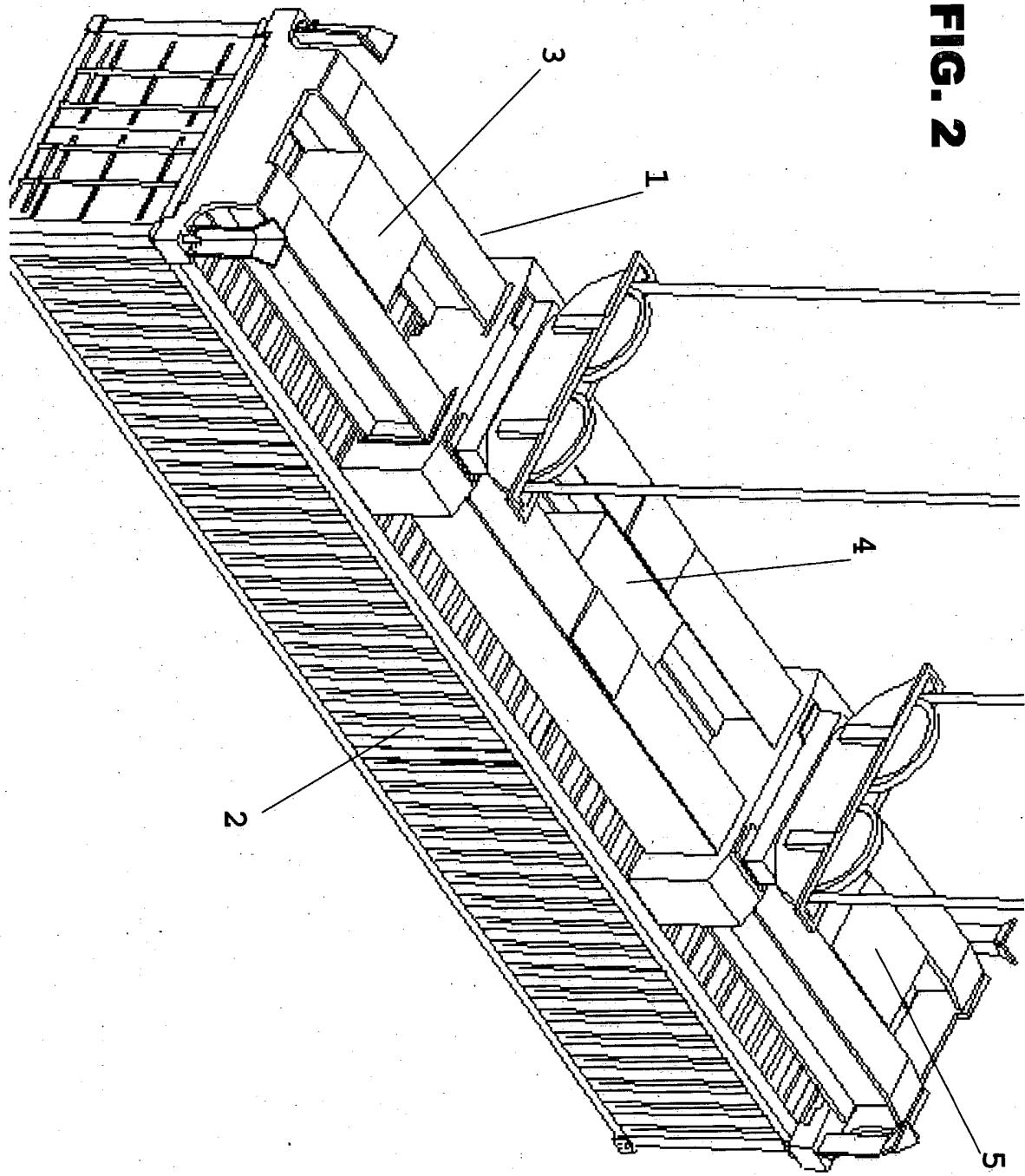
**Sheet 1 of 9**



**FIG. 1**

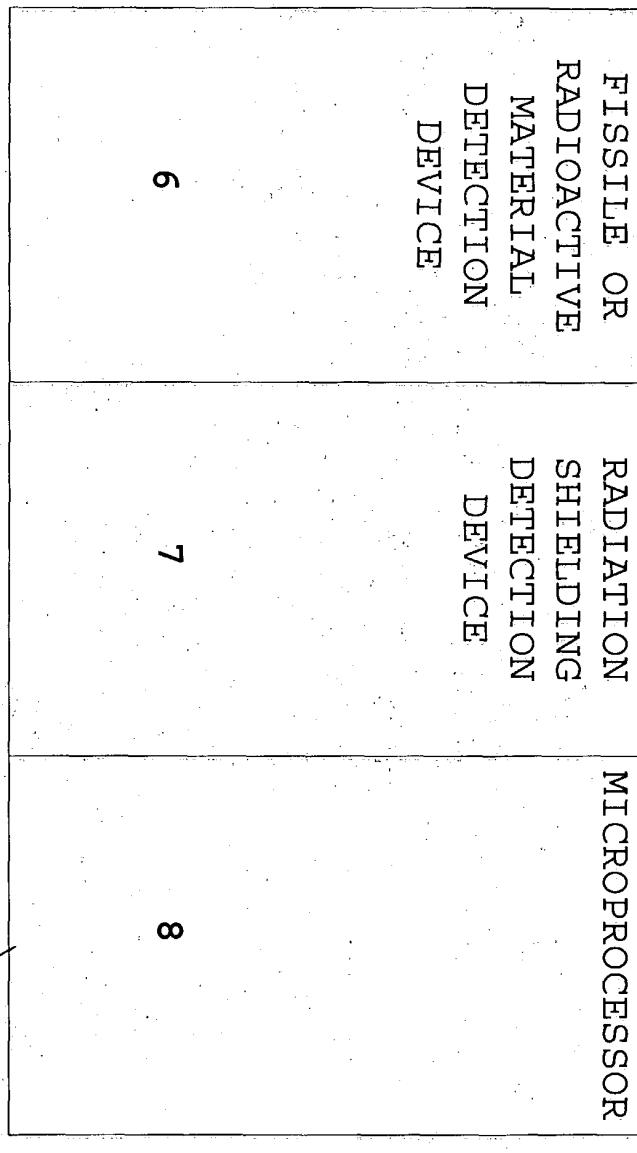
**Sheet 2 of 9**

**FIG. 2**



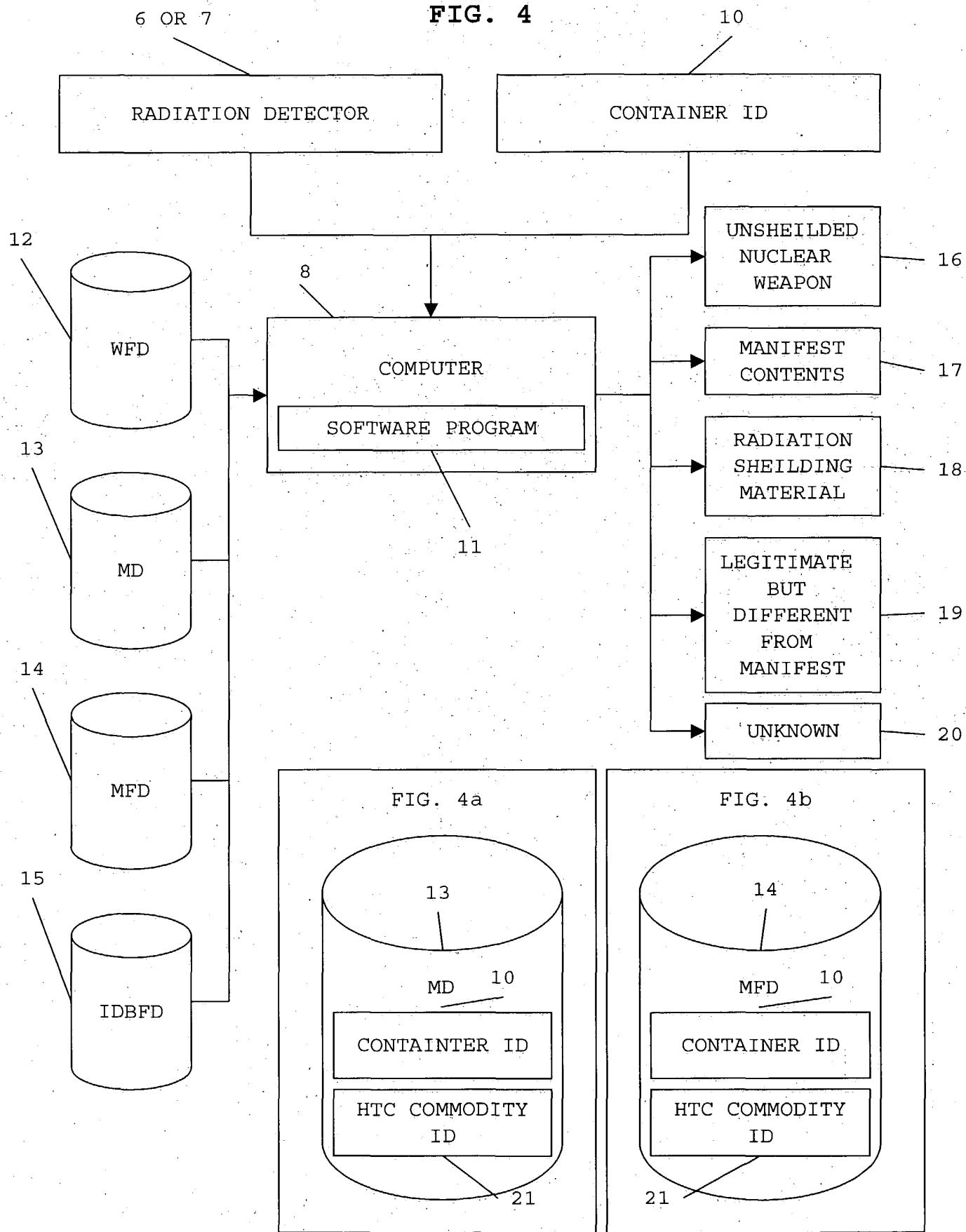
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**FIG. 3**



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**FIG. 4**



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**FIG. 5**

**CREATE ORIGINAL BACKGROUND FINGERPRINT**

22

GATHER DATA FROM EMPTY  
TEST CONTAINER

23

DIGITIZE DATA INTO  
BOTH INTENSITY OF SOURCE  
AND ENERGY OF EACH  
GAMMA RAY GATHERED

24

STORE DIGITIZED DATA  
AS THE ORIGINAL  
BACKGROUND FINGERPRINT

**Sheet 6 of 9**

**FIG. 6**

CREATE WEAPON FINGERPRINT DATABASE

25

GATHER DATA FROM TEST  
CONTAINERS WITH KNOWN  
DANGEROUS RADIOACTIVE  
MATERIALS

26

DIGITIZE INTO INTENSITY  
OF SOURCE AND ENERGY  
OF EACH GAMMA RAY GATHERED

27

SUBTRACT ORIGINAL  
BACKGROUND FINGERPRINT

28

STORE EACH TEST  
CONTAINER RESULT IN WEAPON  
FINGERPRINT DATABASE

**FIG. 7**

CREATE MANIFEST FINGERPRINT DATABASE

29

GATHER DATA FROM TEST  
CONTAINERS WITH KNOWN  
LEGITIMATE CONTENTS

30

DIGITIZE INTO INTENSITY  
OF SOURCE AND ENERGY  
OF EACH GAMMA RAY GATHERED

31

SUBTRACT ORIGINAL  
BACKGROUND FINGERPRINT

32

STORE EACH TEST CONTAINER  
RESULT TOGETHER WITH ITS  
HTC/COMMODITY ID  
IN THE MANIFEST  
FINGERPRINT DATABASE

**Sheet 8 of 8**

**FIG. 8**

**CREATE INSPECTION DAY BACKGROUND FINGERPRINT  
DATABASE**

33

BEGINNING OF EACH DAY OF  
USE, GATHER DATA FROM  
EMPTY TEST CONTAINERS

34

DIGITIZE INTO INTENSITY  
OF SOURCE AND/OR ENERGY  
OF EACH GAMMA RAY GATHERED

35

STORE RESULT AS  
INSPECTION DAY BACKGROUND  
FINGERPRINT IN DATABASE

**Sheet 9 of 9**

**FIG. 9**

